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**PROCEDURE** **Department of Natural Resources**

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**Date:** **August, 1999****Cancels:****PR 14-005-030** **IDENTIFYING AND PRIORITIZING STANDS FOR  
SMALLWOOD AND OLDER-STAND THINNING****APPLICATION** All west-side forest ecosystems managed under the direction of the Forest Resources Division for timber production.**DISCUSSION**

This procedure will direct you on how to identify age class imbalances within an ownership group and to prioritize stands for thinning. The department manages state forest lands to produce a number of products and to maintain a healthy ecosystem. A healthy, fully functional ecosystem is likely to sustain DNR's projected even-flow timber harvest schedule (Forest Resource Plan (FRP) [Policy 4](#)) for current and future generations of beneficiaries. The department bases harvest calculations on volume (board feet) rather than acreage ([FRP Policy 5](#)). This procedure does not supercede other management objectives (i.e., objectives for Watershed Administrative Units (WAU) hydrologic maturity, or for creating nesting, roosting, and foraging (NRF) or dispersal habitat), rather it works in conjunction with all other objectives. Implementing this procedure will facilitate the department's ability to meet its ecological objectives.

Regions must consider all landscape-level objectives, then identify and prioritize timber stands that are eligible for a smallwood or older-stand thinning harvest. (See [PR 14-005-020](#), Identifying and Prioritizing Stands for Regeneration Harvest, for more harvest regulation definitions.) The following terms regarding thinning apply to managing even-aged stands:

 Commercial thinning — a timber harvest that must: 1) produce income for the trust; 2) concentrate growth on or add value to trees for a future harvests; 3) capture appropriate mortality; 4) identify and retain wildlife trees and final harvest trees; and, 5) improve structural diversity and wildlife habitat. Commercial thinning is a management activity that achieves the future forest objective by shaping the forest to meet the overall landscape objectives. Unlike seed tree and shelterwood treatments, the purpose of commercial thinning is not stand regeneration. The department conducts two types of commercial thinning:

- Older-stand thinning — defined for conifer stands as a thinning conducted when the stand is approaching, or is older than, typical DNR rotation ages (i.e., older than those pre-commercial thinned (PCT) or those thinned between 25 and 45 years of age).

 Smallwood thinning - defined for conifer stands as a thinning conducted in a stand that is between 25 and 45 years old that has commercial value.



Both types of thinning may be conducted for habitat improvement when the main objective for the stand is to create, improve, or maintain NRF, dispersal, or riparian habitat.




**Action**

1. Identify stands eligible for smallwood thinning or older-stand thinning. Compile a report.

- a. Smallwood thinning. Use the Forest Resource Inventory System (FRIS) to obtain the necessary information to run DNR's Intensive Management Program Simulator (DNRIMPS) or the Forest Vegetation Simulator (FVS) (for non-FRIS stands, use the field survey method identified in [PR 14-006-070](#), West-side Smallwood Thinning Procedures for Even-aged Stands). In the report, list tree species by diameter grouping per acre, site index, soil type, and age.




i. Stands eligible for smallwood thinning must:

-  be between 25 and 45 years old, and
-  have an initial relative density greater than or equal to:

-  55 for Douglas-fir,
-  70 for western hemlock, or
-  65 for true firs.

- b. Older-stand thinning. If possible, use FRIS to obtain the necessary information. If only Land Use Land Cover (LULC) data is available, sample a stand in the age class that may fit the relative density targets set below. For more information refer to [PR 14-006-070](#), West-side Older-stand Assessment and Management Procedures.

i. Stands eligible for older-stand thinning must have an initial relative density of at least:

-  60 for Douglas-fir,
-  65 for western hemlock, or
-  70 for mixed stands.

Due to forest health reasons, do not consider older-stand thinning on lodgepole pine stands.

2. Prioritize stands.

- a. Prioritize stands eligible for smallwood thinning according to the relative density targets and then by site index requirements listed in [PR 14-006-070](#).



**Note: Give the highest priority to stands that are eligible for smallwood thinning or older-stand thinning to accelerate habitat creation in NRF and dispersal areas. If you have numerous eligible smallwood stands, consider conducting the thinning before completing Step 2(b) below.**

- b. Prioritize stands eligible for older-stand thinning.

- i. Identify the age class distribution. Request a GIS report by ownership group, within a region (see FRP [Policy 6](#) and [Policy 7](#)), in ten year intervals (0-10, 11-20, 21-30, etc.), with the number of acres in each group. Do not include acres that are managed for NRF or dispersal habitat, or for hydrological maturity objectives or lands that are

designated as off-base.

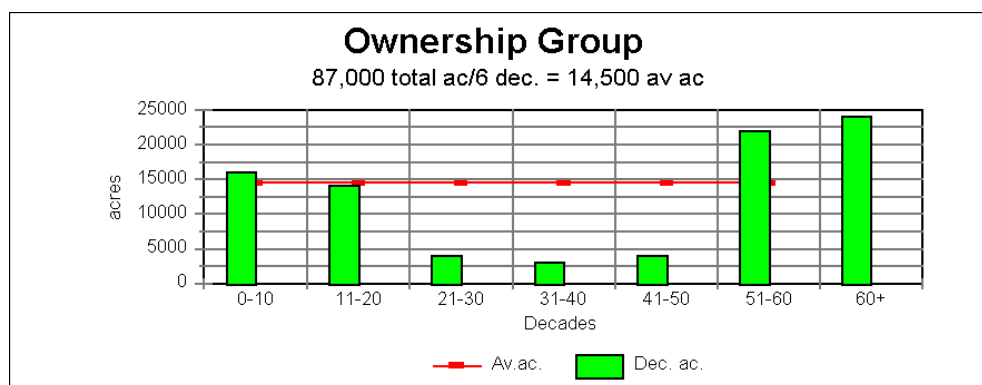
- ii. Divide the total number of acres by six for west-side ownership groups and by eight for east-side ownership groups. The result is approximately the average number of acres that would be harvested each decade if the ownership group were regulated.
- iii. Graph the acres by decade groups (from Step 2(b)i and the average number of acres from Step 2(b)ii).
- iv. Identify those age groups that:

-  have excess acres (i.e., above the average acres per decade).
-  may need additional acres to meet the average acreage targets.

**Note: Although DNR is not on an area control, this method that looks at acres per decade is a good way to estimate the number of acres that will need to be extended beyond the normal rotation age.**

- v. Identify the number of acres that may need to be extended from one decade to another. If a stand will likely be held longer than 20 years, consider it for older-stand thinning.

### EXAMPLE



3. Prioritize the commercial thinning as follows, unless other constraints dictate stand selection (i.e. staffing levels, access, landscape-level objectives, Habitat Conservation Plan commitments, or related constraints):
  - a. Consider older-stand thinnings in stands with a relative density within the relative density ranges set in [PR 14-006-080](#). Stands with high site indexes and the highest relative density will be the highest priority for thinning.

**APPROVED BY:** signed, August 1999  
**Michael, Perez-Gibson, Manager**

## Forest Resources Division

### **SEE ALSO:**

<a href="#"><u>GL 14-006-020</u></a>	<a href="#"><u>REFORESTATION GUIDELINES (under development)</u></a>
<a href="#"><u>PO14-004</u></a>	<a href="#"><u>SUSTAINABLE, EVEN-FLOW TIMBER HARVEST</u></a>
<a href="#"><u>PO14-005</u></a>	<a href="#"><u>HARVEST LEVELS BASED ON VOLUME</u></a>
<a href="#"><u>PO14-006</u></a>	<a href="#"><u>WESTERN WASHINGTON OWNERSHIP GROUPS</u></a>
<a href="#"><u>PO14-007</u></a>	<a href="#"><u>EASTERN WASHINGTON OWNERSHIP GROUPS</u></a>
<a href="#"><u>PO14-030</u></a>	<a href="#"><u>SILVICULTURE ACTIVITIES</u></a>
<a href="#"><u>PR 14-005-020</u></a>	<a href="#"><u>IDENTIFYING AND PRIORITIZING STANDS FOR REGENERATION HARVEST</u></a>
<a href="#"><u>PR 14-006-070</u></a>	<a href="#"><u>WEST-SIDE SMALLWOOD THINNING PROCEDURES FOR EVEN-AGED STANDS</u></a>
<a href="#"><u>PR 14-006-080</u></a>	<a href="#"><u>WEST-SIDE OLDER-STAND ASSESSMENT AND MANAGEMENT PROCEDURES</u></a>

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